



FW

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Duncan C. Ferguson

Group Art Unit: 1761

Serial No.: 10/579,090

Examiner: : Unknown

Filed: 12 May 2006

Docket No.: 235.00540101

Confirmation No.: 5257

Title: DNA SEQUENCE AND EXPRESSED RECOMBINANT GLYCOPROTEINS RELATED TO FELINE THYROTROPIN

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

☒ **Small entity status is entitled to be asserted in the above-identified application.**

☒ **An itemized return postcard.**

☐ A Petition for Extension of Time for \_\_ month(s). Please charge Deposit Account No. 13-4895 in the amount of \$\_\_ for the required fee.

☒ **An Information Disclosure Statement (2 pgs); 1449 forms (4 pgs); and copies of 20 documents cited on the 1449 forms.**

☐ A check in the amount of \$\_\_, representing \_\_.

☐ A certified copy of a \_\_ application, Serial No. \_\_, filed \_\_\_\_, the right of priority of which is claimed under 35 U.S.C. §119.

☐ Amendment ☐ No Additional fee is required. ☐ The fee has been calculated as shown:

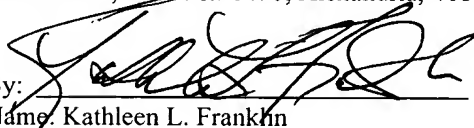
Fee Calculation for Claims Pending After Amendment					
	Pending Claims after Amendment (1)	Claims Paid for Earlier (2)	Number of Additional Claims (1-2)	Cost per Additional Claim	Additional Fees Required
Total Claims				x \$25 =	
Independent Claims				x \$100 =	
One or More New Multiple Dependent Claims Presented? If Yes, Add \$180 Here →					
Total Additional Claim Fees Required					

Please consider this a **PETITION FOR EXTENSION OF TIME** for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.

**CERTIFICATE UNDER 37 C.F.R. §1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: **Mail Stop Amendment**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 29<sup>th</sup> day of December, 2006.

MUETING, RAASCH & GEBHARDT, P.A.

Customer Number: 26813

By:   
Name: Kathleen L. Franklin  
Reg. No.: 47,574  
Direct Dial: 612-305-1873  
Facsimile: 612-305-1228



PATENT  
Docket No. 235.00540101

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Duncan C. Ferguson	)	Group Art Unit:	1761
		)		
Serial No.:	10/579,090	)	Examiner:	Unknown
Confirmation No.:	5257	)		
		)		
Filed:	12 May 2006	)		
		)		
For:	DNA SEQUENCE AND EXPRESSED RECOMBINANT GLYCOPROTEINS RELATED TO FELINE THYROTROPIN			

---

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Pursuant to MPEP § 609, the information cited in the present Information Disclosure Statement shall not be construed to be an admission that the information is, or is considered to be, material to patentability. Consideration of each of the documents listed on the attached 1449 form(s) is respectfully requested. Pursuant to the provisions of M.P.E.P. §609, Applicant further requests that a copy of the 1449 form(s), marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

**Information Disclosure Statement**

Page 2 of 2

Applicant(s): Duncan C. Ferguson

Serial No.: 10/579,090

Confirmation No.: 5257

Filed: 12 May 2006

For: DNA SEQUENCE AND EXPRESSED RECOMBINANT GLYCOPROTEINS RELATED TO FELINE  
THYROTROPIN

---

The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 29<sup>th</sup> day of December, 2006.

  
KATHLEEN L. FRANKLIN

29 December 2006  
Date

Respectfully submitted

By

Mueting, Raasch & Gebhardt, P.A.

P.O. Box 581415

Minneapolis, MN 55458-1415

Phone: (612)305-1220

Facsimile: (612)305-1228

Customer Number 26813

By:   
Kathleen L. Franklin

Reg. No. 47,574

Direct Dial (612)305-1873

**INFORMATION  
DISCLOSURE  
STATEMENT****Atty. Docket No.:** 235.00540101**Serial No.:** 10/579,090**Applicant(s):** Duncan C. Ferguson**Confirmation No.:** 5257**Application Filing Date:** May 12, 2006**Group:** 1761

Information Disclosure Statement mailed:

December 29, 2006

**U.S. PATENT DOCUMENTS**

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		4,036,945	07/19/77	Haber			
		4,331,647	05/25/82	Goldenberg			
		5,196,513	03/23/83	Ryan et al.			
		5,560,922	10/01/96	Chien et al.			
		5,788,983	08/04/98	Chien et al.			
		5,840,566	11/24/98	Kourides et al.			
		6,114,144	09/05/00	Kourides et al.			
		6,117,991	09/12/00	Wondisford et al.			
		6,284,491	09/04/01	Wondisford et al.			
		6,306,434	10/23/01	Hong et al.			
		6,342,221	01/29/02	Thorpe et al.			
		6,365,127	04/02/02	Kourides et al.			
		6,365,146	04/02/02	Uhrich			
		2001/0053538 A1	12/20/01	Wondisford et al.			
		2003/0198596 A1	10/23/03	Kourides et al.			
		2004/0132137 A1	07/08/04	Wondisford et al.			
		2006/0148005 A1	07/06/06	Wondisford et al.			

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Copy Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	X	EP 0 228 604 A2, A3	07/15/87	EPO				
	X	WO 90/08528 A1	08/09/90	WIPO				
	X	WO 2005/047319 A1	05/26/05	WIPO				

<b>EXAMINER</b>	<b>Date Considered</b>
<p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

<b>INFORMATION DISCLOSURE STATEMENT</b>	<b>Atty. Docket No.:</b> 235.00540101	<b>Serial No.:</b> 10/579,090
	<b>Applicant(s):</b> Duncan C. Ferguson	<b>Confirmation No.:</b> 5257
	<b>Application Filing Date:</b> May 12, 2006	<b>Group:</b> 1761
	Information Disclosure Statement mailed: December 29, 2006	

**OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)**

Examiner Initial	Copy Enclosed	Document Description
	X	Bruyette, "Feline Hyperthyroidism," World Congress [online]. World Small Animal Veterinary Association World Congress, Vancouver, BC, Canada, August 8-11, 2001 [retrieved on 2003-11-05]. Retrieved from the Internet:<URL:www.vin.com/VINDBPub/SearchPB/Proceedings/PR05000/PR00107.htm>; 5 pgs.
	X	Huysmans et al., "Administration of a Single Low Dose of Recombinant Human Thyrotropin Significantly Enhances Thyroid Radioiodide Uptake in Nontoxic Nodular Goiter," <i>The Journal of Clinical Endocrinology &amp; Metabolism</i> , Oct. 2000; 85(10):3592-3596.
	X	Narayan et al., "Functional Expression of Yoked Human Chorionic Gonadotropin in Baculovirus-Infected Insect Cells," <i>Molecular Endocrinology</i> , Dec. 1995; 9(12):1720-1726.
	X	National Center for Biotechnology Information, GenBank Locus AF160250, Accession No. AF160250, "Canis familiaris thyrotropin alpha subunit mRNA, complete cds." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from Internet:<http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&val=5360187>; 2 pages.
	X	National Center for Biotechnology Information, GenBank Locus AF354939, Accession No. AF354939, "Panthera tigris altaica glycoprotein hormone alpha subunit (GPH) mRNA, complete cds." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet: <http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&val=13561973>; 2 pages.
	X	National Center for Biotechnology Information, GenBank Locus AF408393, Accession No. AF408393, "Panthera tigris altaica glycoprotein hormone alpha subunit precursor, mRNA, complete cds." [online] Bethesda, MD [retrieved on 2006-10-03]. Retrieved from the Internet: <http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&val=22535904>; 2 pages.

<b>EXAMINER</b>	<b>Date Considered</b>
<p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

<b>INFORMATION DISCLOSURE STATEMENT</b>	<b>Atty. Docket No.:</b> 235.00540101	<b>Serial No.:</b> 10/579,090
	<b>Applicant(s):</b> Duncan C. Ferguson	<b>Confirmation No.:</b> 5257
	<b>Application Filing Date:</b> May 12, 2006	<b>Group:</b> 1761
	Information Disclosure Statement mailed: December 29, 2006	

Examiner Initial	Copy Enclosed	Document Description
	X	National Center for Biotechnology Information, GenBank Locus AY972823, Accession No. AY972823, "Felis catus thyrotropin alpha mRNA, complete cds." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet:< <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=62530408">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=62530408</a> >; 2 pages.
	X	National Center for Biotechnology Information, GenBank Locus AY972824, Accession No. AY972824, "Felis catus thyrotropin beta (TSHB) gene, complete cds." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet:< <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=62530410">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=62530410</a> >; 2 pages.
	X	National Center for Biotechnology Information, GenBank Locus P54828, Accession No. P54828, "Thyrotropin beta chain precursor (Thyroid-stimulating hormone beta subunit) (TSH-beta) (TSH-B)." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet:< <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&amp;val=1717805">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&amp;val=1717805</a> >; 3 pages.
	X	National Center for Biotechnology Information, GenBank Locus Q9SXW8, Accession No. Q9SXW8, "Chlorophyll a/b-binding protein." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet:< <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&amp;val=75266683">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=protein&amp;val=75266683</a> >; 2 pages.
	X	National Center for Biotechnology Information, GenBank Locus CFU51644, Accession No. U51644, "Canis familiaris thyrotropin beta chain mRNA, complete cds." [online] Bethesda, MD [retrieved on 2006-10-02]. Retrieved from the Internet:< <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=1263292">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nucleotide&amp;val=1263292</a> >; 2 pages.
	X	Nguyen et al., "Cloning of the Cat TSH Receptor and Evidence Against an Autoimmune Etiology of Feline Hyperthyroidism," <i>Endocrinology</i> , 2002; 143(2):395-402.

<b>EXAMINER</b>	<b>Date Considered</b>
<p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

<b>INFORMATION DISCLOSURE STATEMENT</b>	<b>Atty. Docket No.:</b> 235.00540101	<b>Serial No.:</b> 10/579,090
	<b>Applicant(s):</b> Duncan C. Ferguson	<b>Confirmation No.:</b> 5257
	<b>Application Filing Date:</b> May 12, 2006	<b>Group:</b> 1761
	Information Disclosure Statement mailed: December 29, 2006	

Examiner Initial	Copy Enclosed	Document Description
	X	Rayalam et al., "Recombinant Feline Thyrotropin (fTSH): Immunological Detection and Bioactivity," Abstract, Fifth Annual Georgia Graduate Student Interdisciplinary Conference, February 11-12, 2005; University of Georgia, Athens, GA, title page, Table of Contents, partial schedule for Saturday, Feb. 12, and page 20.
	X	Rayalam et al., "Cloning and sequencing of feline thyrotropin (fTSH): Heterodimeric and yoked constructs," Abstract, Proceedings of the 23 <sup>rd</sup> Veterinary Medical Forum, American College of Veterinary Internal Medicine, Baltimore, MD; June 1-4, 2005.
	X	Rayalam et al., "Expression and purification of feline thyrotropin (fTSH): Immunological detection and bioactivity of heterodimeric and yoked glycoproteins," Abstract, Proceedings of the 23 <sup>rd</sup> Veterinary Medical Forum, American College of Veterinary Internal Medicine, Baltimore, MD; June 1-4, 2005.
	X	Rayalam et al., "Cloning and sequencing of feline thyrotropin (fTSH): Heterodimeric and yoked constructs," <i>Domestic Animal Endocrinology</i> , March 2006; 30:203-217. Published on-line August 9, 2005.
	X	Rayalam et al., "Expression and purification of feline thyrotropin (fTSH): Immunological detection and bioactivity of heterodimeric and yoked glycoproteins," <i>Domestic Animal Endocrinology</i> , March 2006; 30:185-202. Published on-line August 10, 2005.

<b>EXAMINER</b>	<b>Date Considered</b>
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	